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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,779	11/19/1999	SU CHIN CHANG	13237-2495	7712
27366 7590 05/16/2007 WESTMAN CHAMPLIN (MICROSOFT CORPORATION) SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER SPOONER, LAMONT M	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/443,779

Applicant(s)

CHANG ET AL.

Examiner

Lamont M. Spooner

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2/22/07.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17,20-23,32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17,20-23,32 and 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/07 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The Examiner further notes, as argued by applicant, "Thus, Loatman's analysis of the word 'dirty' not only fails to show a constituent, but it also fails...", that in Figs. 8, and 9 as previously cited, the constituents, are shown, and the rules in generating the constituents, including alternate rules for generating constituents, are displayed in Fig. 9b.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities:

In claim 1, line 7, "ruler" should probably be - -rule- -. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Loatman et al. (Loatman, US 4,914,590).

As per **claims 1, 7, 8**, Loatman et al teach a method for analyzing and debugging natural language parses, comprising (figures 8A-16B):

"Displaying a parse tree for a textual input, the parse tree being generated based on rules and comprising at least one connecting point having two children" (figure 8a, col. 36, lines 21-55, the complex sentence "Reagan warned... the strait" is parsed and the parse tree shown in figure 8a);

"Receiving control input selecting one of said connecting points as a selected connecting point" (col. 36, line 56 to col. 37, line 25-his R

debugging point, a graphic debugging tool that is displayed allows the user to interact with the output of the parse and to select a node (connecting point) of the parse tree); col. 17, line 1 to col. 22, line 56, his system browser);

“Determining whether a rule was applied to form a constituent was formed at said connecting point, the constituent representing at least the two children joined together” (Fig. 9a, 9b-his F0933 Variable values, define the representation of the two children joined together “to block the Iranians actions”, “warships stationed in”, col. 37, lines 7-25, the leaf nodes represent the individual words of input which have been morphologically analyzed, the Examiner notes that forming a constituent inherently requires a rule, and the determination of whether a rule was applied, is inherent to the multiple paths in followed in the determining of a constituent, Figs. 8a, Fig. 14, Fig. 19, note in Fig. 8a and C.36, lines 43-C.37.line 25-several rules are applied, which inherently requires a determination of whether a rule was applied in order for recursive calls applying different rules); and

“if the determination is positive, displaying a plurality of display items proximate to said selected connecting point” (col. 37, lines 14-25, the user has bugged the node which hold the parse of the clause and a menu of that

clause is displayed, Figs. 9a, 9b-his constituents, "to block the Iran act", "that would close", the positive determination in his menu displayed).

"the display items including alternate rules applicable at the selected connecting point to generate constituents, other than the rules used in generating a constituent at the selected connecting point" (Fig 9B-his F0933 variables menu as proximate, his menu of items interpreted to include alternate rules other than rules used in generating a constituent at the selected connecting point, these F0933 rules include rules applicable at the selected connecting point to generate constituents).

As per **claim 2**, Loatman et al teach "receiving control input one of said plurality of menu..." (figures 10a-10b, the user interact with three window, col. 37, lines 30-54, col. 17, line 1 to col. 22, line 56, his system browser in particular section 2- 4. 1.3, col. 2 1, lines 37-48 that recites pressing the right button, bring s a menu of graph editing options where a link / node can be deleted);

"In response to receiving said control input for deleting said constituent , deleting said constituent" (col. 21, lines 35-47, a node is deleted accordingly).

As per **claim 3**, Loatman et al teach receiving control input for selecting one of said plurality of display items for deleting said parse tree" (col. 22, lines 48-57, the DeleteLink Fn prompts for the From and To nodes from which delete the link and the graph (parse tree)).

"In response...deleting constituent formed at each connecting point in said parse tree" (col. 22, lines 48-59).

As per **claim 4**, Loatman et al teach "receiving control input selecting ..displaying information regarding said children of said selected connecting point" (figures 43A through 43D, col. 31, line 64 to col. 32, line 50, particularly col. 32, lines 18-24);

"Displaying information regarding said children of said selected connecting point" (figures 43A through 43D, col. 31, line 64 to col. 32, line 50, particularly col. 32, line 18-24, his system browser can display all the parse showing the links (nodes) of parent and children).

As per **claim 5**, Loatman et al teach displaying a first plurality of menu ... identifying a grammar rule applied at said selected point to form constituent" (col. 38, line 35 to col. 40, line 2 his grammar development example).

As per **claim 6**, Loatman et al further teach wherein said control input selecting one of said connecting points as a selected connecting point comprises: “

Receiving input from an input placing a pointer of a user interface proximate to one of said connecting point" (col. 17, lines 1-50, the user selects any displayed node to be operated on with a browser windows that acts as menus); and

“receiving input representing an enabled state for the control of the input device" (col. 17 , lines 1-40),.

As per **claim 9**, Loatman et al teach determining whether a constituent was formed at said selected connecting point comprises determining whether a rule was successfully applied at said selected connecting ..." (Col. 37, line 65 to col. 38, , line 20).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



7. Claims 10-17, 20-23, 32 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over (Loatman, US 4,914,590).

**Claim 10** recites the limitations of claim 1 (see rejection of claim 1 above), and further recites the menu items including an alternate grammar rule display items which when activated, displays alternate grammar rules comprising grammar rules that are alternates to the rule applied in generating the constituent formed at the selected connecting point in the parse tree (Fig. 8-9, Fig. 9b-his F0933 Variables menu includes alternate the rules), but lacks, displaying a plurality of display items proximate to said selected connecting point, wherein, the display items including alternate rules, other than the rules used in generating a constituent at the selected connecting point.

However, the Examiner notes that having a menu proximate to a selected node is evidenced by Loatman (Fig. 14 and Fig. 9b). Therefore, at the time of the invention, it would have been obvious to modify the embodiment of Fig. 9b with the embodiment of Fig. 19, his menu. The motivation for doing so would have been to view a menu near a selected item (such as a node being debugged/edited, etc.).

As per **claim 11**, Loatman et al teach receiving control selecting one of said plurality of menu items (col. 17, line 1 to col. 22, line 57, his system browser wherein when a node is selected, menus are displayed relate to examining and modifying things, provide database search and edit the window's graph);

"in response to receiving user input...displaying a second plurality of menus item proximate to said plurality of menu items" (col. 17, lines 52-61, a menu of the object slot is displayed , then when a slot is selected a menu of its facets will pop up).

As per claims **12- 16**, Loatman et al teach receiving control input selecting, activating the alternate grammar rules display item... connecting point; (figure 9b, Fig. 19),. and

"displaying a first group of rules comprising all of the rules that may be applied at said selected connecting point of said constituents of said connecting point" (figure 9b, col. 11, line 10 to col. 12, line 12).

As per claims **17, 20-23 and 32-33**, Loatman et al teach receiving control input activating the alternate grammar rules display items for displaying a group of alternate rules applied at said selected connecting point that did not successfully form a constituent at said selected

connecting point and displaying of alternate rules (see claim 1 positive determination discussion, claim 1 and 10 alternative rules not applied discussion, also figure 9b-his z as the bug point, Fig. 19-his "dirty not recognized" and verification as successful and unsuccessful determination, col. 45, lines 21-68, -wherein the rules are included in his alternate rules, and the determination is deemed unsuccessful, thus prompting the dirty not being recognized).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Moot, Grail An Automated Proof Assistant for Categorical Grammar Logistics, Proceedings of the 1998 User Interfaces for Theorem Provers Conference, 1998- teaches displaying items including alternate rules, other than the rule used in generating a constituent.
- Freiling et al. (US 4,816,994) teaches "Displaying a parse tree for a textual input, the parse tree being generated based on rules and comprising at least one connecting point having two children";

“Determining whether a rule was applied to form a constituent was formed at said connecting point, the constituent representing at least the two children joined together”; and

“if the determination is positive, displaying a plurality of display items proximate to said selected connecting point”.

“the display items including alternate rules applicable at the selected connecting point to generate constituents, other than the rules used in generating a constituent at the selected connecting point”.

- vanNoord, Hdrug. A Flexible and Extendible Development Environment for Natural Language Processing, Proceedings of the EACL/ACL..., 1997, pages 91-98-teaches of an interactive environment to develop grammars.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M. Spooner whose telephone number is 571/272-7613. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571/272-

7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

lms  
5/13/05

  
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